

**Tisa, Kimberly**

---

**From:** Rick Kowalski <rkowalski@aeiconsultants.com>  
**Sent:** Tuesday, May 08, 2018 3:49 PM  
**To:** Tisa, Kimberly; Battaglia, Frank  
**Cc:** Stephen Graham; Joseph F Guarnaccia; Aaron Ting  
**Subject:** RE: Former Ciba-Geigy, Cranston, RI - CMI Work Plan - Response to Comments  
**Attachments:** Appendix F pg 18- SAP-BASF Cranston\_ 9-5-17 rev 05-08-18.pdf; Appendix F pg 18t- SAP-BASF Cranston\_ 9-5-17 rev 05-08-18-tracked.pdf

Ok, BASF agrees to include sidewall sampling on a 5-ft grid for excavations deeper than 1 ft. I have attached the revised pg 18 of Appendix F which reflects this change (clean and tracked versions). Please let us know if we need to resubmit revised Responses to Comments and/or hard copies of the attached, or if this email will suffice. Thanks,

Richard G. Kowalski, CPG, LSP, CHMM  
Senior Hydrogeologist

**AEI Consultants**  
112 Water Street, 5th Floor  
Boston, MA 02109

c. 508.951.3673  
f. 857.233.5531  
www.aeiconsultants.com

---

**From:** Tisa, Kimberly <Tisa.Kimberly@epa.gov>  
**Sent:** Monday, May 07, 2018 12:03 PM  
**To:** Rick Kowalski <rkowalski@aeiconsultants.com>; Battaglia, Frank <battaglia.frank@epa.gov>  
**Cc:** Stephen Graham <sgraham@aeiconsultants.com>; Joseph F Guarnaccia <joseph.guarnaccia@basf.com>; Aaron Ting <ating@aeiconsultants.com>; Tisa, Kimberly <Tisa.Kimberly@epa.gov>  
**Subject:** RE: Former Ciba-Geigy, Cranston, RI - CMI Work Plan - Response to Comments

Frank and I have not had time to discuss these revisions, but I did want to get back to you in the interim on your response to Comment 10.

EPA must disagree that the TSCA regulations do not cover the sidewalls. Specifically, § 761.283(b)(1) states "Use a square-based grid system to overly the **entire** area to be sampled." This of course would include sidewalls since you are also trying to confirm the PCB cleanup standard has been achieved. If the excavation depth is < 5 feet, you would still collect a sample, unless it is a shallow excavation. We generally don't require such sampling if excavation depths are < 1 foot or so, as we would use the lateral sampling data to support the extent.

In fact, the easiest way to consider the excavation area is to collapse the sidewalls, similar to how you would flatten a box and then overlay the grid on each surface.

Your reference to the "two-dimensional grid" is found at § 761.283(b)(2), which follows the initial grid layout described under § 761.283(b)(1).

*Kimberly N. Tisa, PCB Coordinator*



USEPA  
5 Post Office Square, Suite 100  
Boston, MA 02109-3912

617.918.1527 (phone)  
617.918.0527 (fax)  
[Tisa.Kimberly@epa.gov](mailto:Tisa.Kimberly@epa.gov)

---

**From:** Rick Kowalski [<mailto:rkowalski@aeiconsultants.com>]  
**Sent:** Tuesday, May 01, 2018 1:50 PM  
**To:** Tisa, Kimberly <[Tisa.Kimberly@epa.gov](mailto:Tisa.Kimberly@epa.gov)>; Battaglia, Frank <[battaglia.frank@epa.gov](mailto:battaglia.frank@epa.gov)>  
**Cc:** Stephen Graham <[sgraham@aeiconsultants.com](mailto:sgraham@aeiconsultants.com)>; Joseph F Guarnaccia <[joseph.guarnaccia@basf.com](mailto:joseph.guarnaccia@basf.com)>; Aaron Ting <[ating@aeiconsultants.com](mailto:ating@aeiconsultants.com)>  
**Subject:** Former Ciba-Geigy, Cranston, RI - CMI Work Plan - Response to Comments

Dear Kim and Frank: Attached are BASF's Responses to Comments as a follow-up to our conference call on April 26, 2018. Attached to this letter are clean and tracked versions of the pages from the CMI Work Plan that were revised. Only the first page of revised Table 4.1 is included. If you would like a complete version of the revised table, we can include a clean version with the hard copy to be sent to you this week. Please let us know if you have any questions. Thanks,

Richard G. Kowalski, CPG, LSP, CHMM  
Senior Hydrogeologist

**AEI Consultants**  
112 Water Street, 5th Floor  
Boston, MA 02109

c. 508.951.3673  
f. [857.233.5531](tel:857.233.5531)  
[www.aeiconsultants.com](http://www.aeiconsultants.com)

## 4.0 SAMPLING RATIONALE

Sampling of soil and groundwater will be conducted at the conclusion of each remedial phase, except for soil capping, to verify compliance with the cleanup standards in **Tables 3-1a** and **3-1b**. At this time, the groundwater remedy is in the design phase and an Initial Production Task (IPT) will be completed prior to the completion of the full design. This SAP includes the groundwater progress monitoring sampling proposed for the IPT.

### 4.1 Soil Sampling

Soil removal and disposal (R&D) will occur prior to soil sampling. Soil sample collection will be conducted by AEI field staff. Soil sample results will be used to show compliance with the cleanup standards. Excavation areas and proposed points of compliance are shown on **Figures 1** and **2**. Bottom and sidewall samples will be collected at the nodes of a 5-foot grid. Sidewall samples are not shown and will be determined in the field by the AEI field staff based upon final excavation area. ~~Sidewall samples will be located so at least one sample per sidewall is collected. Frequency will be 1 sample per every 25 linear feet. Sidewall samples will be collected every 4 feet in depth.~~ **Table 4-1** provides information regarding the sample designation, proposed sample depths, sample/duplicate/QC rationale. Sidewall sample depths are to be determined based upon final excavation extents.

### 4.2 Sediment Sampling

*Not applicable to this scope of work*

### 4.3 Groundwater Sampling

An IPT will be performed as part of the groundwater treatment pilot study. Following the IPT, progress monitoring of the VOC contamination in site groundwater will be conducted by AEI. Deep and shallow groundwater will be evaluated using existing on-Site wells. The proposed compliance wells are shown on **Figure 3**. **Table 4-2** provides sample designation, sample depth, sample locations/duplicate information.

### 4.4 Other Sampling

Samples for disposal characterization purposes may need to be collected during the course of work. Frequency of sampling will be specified by the selected disposal facility, but for this project it is anticipated the required sample frequency will be one (1) sample for every 500 tons of material. When collecting soil samples for disposal purposes, the disposal parameters for approval shall be used as the analytical requirements. These analyses may include: VOCs, PCBs, SVOCs, TPH, RCRA 8 Metals, Reactivity, Ignitability, Paint Filter, and Total Cyanide and Sulfur.

## 4.0 SAMPLING RATIONALE

Sampling of soil and groundwater will be conducted at the conclusion of each remedial phase, except for soil capping, to verify compliance with the cleanup standards in **Tables 3-1a** and **3-1b**. At this time, the groundwater remedy is in the design phase and an Initial Production Task (IPT) will be completed prior to the completion of the full design. This SAP includes the groundwater progress monitoring sampling proposed for the IPT.

### 4.1 Soil Sampling

Soil removal and disposal (R&D) will occur prior to soil sampling. Soil sample collection will be conducted by AEI field staff. Soil sample results will be used to show compliance with the cleanup standards. Excavation areas and proposed points of compliance are shown on **Figures 1** and **2**. Bottom and sidewall samples will be collected at the nodes of a 5 foot grid. Sidewall samples are not shown and will be determined in the field by the AEI field staff based upon final excavation area. **Table 4-1** provides information regarding the sample designation, proposed sample depths, sample/duplicate/QC rationale. Sidewall sample depths are to be determined based upon final excavation extents.

### 4.2 Sediment Sampling

*Not applicable to this scope of work*

### 4.3 Groundwater Sampling

An IPT will be performed as part of the groundwater treatment pilot study. Following the IPT, progress monitoring of the VOC contamination in site groundwater will be conducted by AEI. Deep and shallow groundwater will be evaluated using existing on-Site wells. The proposed compliance wells are shown on **Figure 3**. **Table 4-2** provides sample designation, sample depth, sample locations/duplicate information.

### 4.4 Other Sampling

Samples for disposal characterization purposes may need to be collected during the course of work. Frequency of sampling will be specified by the selected disposal facility, but for this project it is anticipated the required sample frequency will be one (1) sample for every 500 tons of material. When collecting soil samples for disposal purposes, the disposal parameters for approval shall be used as the analytical requirements. These analyses may include: VOCs, PCBs, SVOCs, TPH, RCRA 8 Metals, Reactivity, Ignitability, Paint Filter, and Total Cyanide and Sulfur.